

1. A magnetic stereotactic system for treatment delivery, the system comprising:

a plurality of magnetic coils arranged to at least partially to surround a body part and generate a changeable magnetic field to guide a magnetic object within the body part;

at least one x-ray source and at least one x-ray detector on opposite sides of the body part, and outside the magnetic coils but aligned with the magnetic coils to provide images of the body part that is partially surrounded by the coils.

As set forth in claim 1, the invention is a magnetic stereotaxis system for treatment delivery. As further set forth in claim 1 this system comprises a plurality of magnet coils and at least one x-ray source and detector. There may or may not be other elements to the system, but a claim need not specify all of the elements of the system, just the elements that the inventors regard as their invention. The Office Action states that "there is no positive recitation of the means which is used for treatment delivery and its connection with the stereotactic system." However, the claim does positively recite elements of the means for treatment delivery: the magnet coils and the x-ray source and detector, and it does specify their connection with the stereotaxis system: they comprise the stereotaxis system.

Claim 4 requires:

4. A magnetic stereotactic system for treatment delivery, the system comprising:  
a plurality of hollow magnetic coils having generally central openings, the coils being arranged to surround a body part and generate a changeable magnetic field to guide a magnetic object within the body part;

at least one x-ray source and at least one x-ray detector on opposite sides of the body part, and outside the hollow magnetic coils but aligned with their central opening to provide images of the body part inside the coils.

As set forth in claim 4, the invention is a magnetic stereotaxis system for treatment delivery. As further set forth in claim 4 this system comprises a plurality of hollow magnetic coils and at least one x-ray source and detector. There may or may not be other elements to the system, but a claim need not specify all of the elements of the system, just the elements that the inventors regard as their invention. The Office Action states that "there is no positive recitation of the means which is used for treatment delivery and its connection with the stereotactic system." However, the claim does positively recite elements of the means for treatment delivery: the

magnet coils and the x-ray source and detector, and it does specify their connection with the stereotaxis system: they comprise the stereotaxis system.

For the foregoing reasons, applicants respectfully submit that claims 1 through 6 are in compliance with 35 U.S.C. §112.

Applicants respectfully request reconsideration of the rejection of claims 1 through 11 under 35 U.S.C. §103 as unpatentable over Howard III, et al., U.S. Patent No. 4,869,247, and Tillander, U.S. Patent No. 3,674,014. Claim 1 requires an x-ray source and the x-ray detector outside the magnet coils and "aligned with the magnetic coils to provide images of the body part that is partially surrounded by the coils. Neither Howard III, et al., nor Tillander, teach or suggest a magnetic stereotaxis system in which magnet coils surround a body part and in which an x-ray source and an x-ray detector are aligned with the magnet coils. Tillander does not even address the issue of imaging, and while Howard III, et al., contemplates imaging, it does not teach aligning an x-ray source and an x-ray detector with the magnet coils used for magnetic navigation. Claims 2 and 3 depend from claim 1, and are allowable for the same reasons advanced with respect to claim 1.

Similarly, claim 4 requires "at least one x-ray source and at least one x-ray detector on opposite sides of the body part, and outside the hollow magnetic coils but aligned with their central opening to provide images of the body part inside the coils" As discussed above with respect to claim 1, neither Howard III, et al., nor Tillander, teach or suggest aligning an x-ray source and an x-ray detector aligned with the central openings in magnet navigation coils. Claims 5 and 6 depend from claim 4, and are allowable for the same reasons advanced with respect to claim 4.

Claim 7 is directed to a method of magnetically navigating a medical device comprising the step of displaying images of the body part and the location of the medical device therein from at least one x-ray source and at least one x-ray detector positioned on opposite sides of the body part, the x-ray source and detector being "outside the magnetic coils but the path between the at least one x-ray source and its associated detector being aligned with at least one of the coils to

provide images of the body part partially surrounded by the coils". As discussed above with respect to claim 1 and 4, neither Howard III, et al., nor Tillander teach imaging with an x-ray source and an x-ray detector aligned with electromagnet coils surrounding the body part through which a magnetic medical device is being magnetically navigated. Claims 8 and 9, depend from claim 7 and are allowable for the same reasons advanced with respect to claim 7.

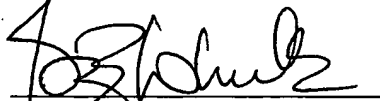
Claim 10 is directed to a method of delivering medical treatment to a specific location in the body. The method comprises magnetically navigating a medical treatment device in the body and "removing the medical treatment device from the body by pulling the thin elongate portion to pull the medical treatment device from the body." This is not shown in Howard III, et al. nor in Tillander. For at least this reason, the method set forth in claim 11 is not obvious under 35 U.S.C §103.

Claim 11 is directed to a method of delivering medical treatment to a specific location in the body. The method comprises temporarily coupling a magnet to a medical treatment device having a thin, elongate portion, moving the medical treatment device within the body by applying a magnetic field to move the magnetic object coupled to the medical treatment device, leaving the thin elongate portion of the medical treatment device in the path through the body, decoupling the magnet from the magnetic treatment device, and removing the magnet from the body; and removing the medical treatment device from the body by pulling the thin elongate portion to pull the medical treatment device from the body. This is not shown in Howard III, et al. nor in Tillander. For at least this reason, the method set forth in claim 11 is not obvious under 35 U.S.C §103.

Applicants are not aware of any prior magnetic navigation system employing magnet coils where an x-ray source and an x-ray detector are aligned with the magnets to image a body part inside the magnet coils. For at least this reason, applicants respectfully submit that claims 1 through 9 are allowable. Nor are applicants aware of any prior magnetic navigation system in which a medical treatment device is removed from the body by pulling a thin, elongate portion, as required by claim 10, and for at least this reason, applicants respectfully submit that claim 10 is allowable. Similarly, applicants are not aware of any prior art navigation system in which a

medical treatment device associated with a magnet is navigated in the body, separated from the magnet, and removed from the body by pulling a thin, elongate portion, as required by claim 11, and for at least this reason, applicants respectfully submit that claim 11 is allowable. If it would advance the prosecution of this application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Bryan K. Wheelock', written over a horizontal line.

Bryan K. Wheelock

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